

Results

Crash Reductions (Using 3 Year Before and After Periods)

Total Crashes:	47.6% Reduction	(From 21 crashes to 11 crashes)
Target Crashes*:	76.5% Reduction	(From 17 crashes to 4 crashes)
Target Injury Crashes:	50.0% Reduction	(From 8 crashes to 4 crashes)
Target PDO Crashes:	100% Reduction	(From 9 crashes to 0 crashes)
AADT:	5.8% Increase	(From 45,000 vehicles to 47,600 vehicles)

* Target Crashes include all Frontal Impact Crashes.
The Frontal Impact Crash types considered are as follows: Left Turn-Same Roadway, Left Turn-Different Roadways, Right Turn-Same Roadway, Right Turn-Different Roadways, Head On, and Angle.

The Treatment Location appears to have had a substantial decrease in both Total and Target Crashes from the before to the after period. The safety treatments appear to have dramatically reduced the number of frontal impact crashes and the injuries associated with the potentially high severity crash types. In addition, it appears that the redirection of side street traffic at the treatment intersection has had minimal impact on the number of crashes at the surrounding median crossover locations.

Location Photo Taken on August 24, 2005



For the complete project evaluation report and reports on other projects, please go to:
<http://www.ncdot.org/doh/preconstruct/traffic/Safety/ses/projects/completed.html>

North Carolina Department of Transportation
Traffic Engineering and Safety Systems Branch
Traffic Safety Systems Management Section
Safety Evaluation Group

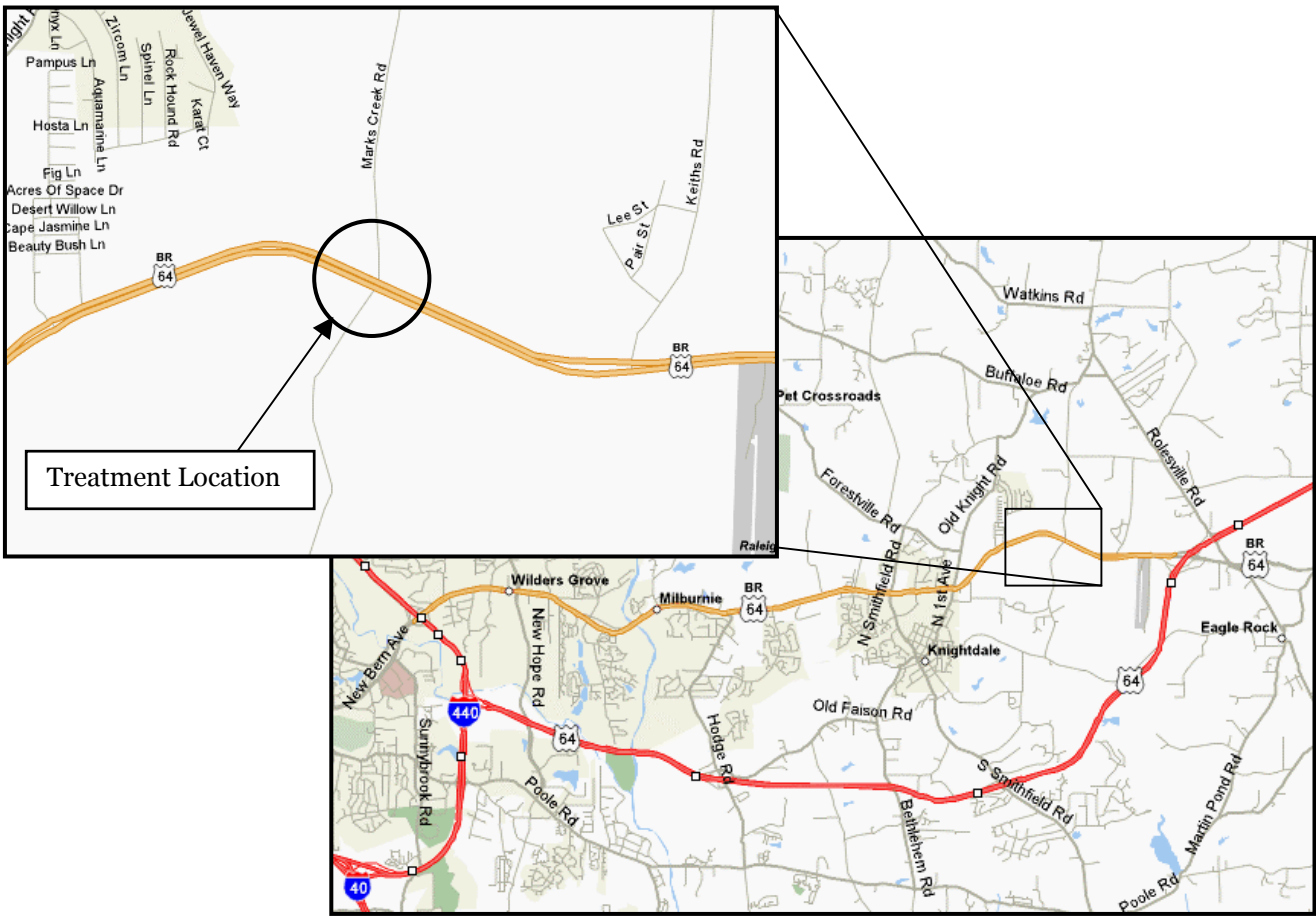
Evaluation of Spot Safety Project # 05-99-243

The Directional Crossover Installation at the Intersection of US 64 and SR 2234/
SR 2500 (Mark's Creek Road) in Wake County

The subject intersection is located in a rural area east of Knightdale. Traffic Engineering staff originally recognized this location as needing safety improvements because it was experiencing a large number of frontal impact type crashes. In the three-year time period between May 1, 1996 through April 30, 1999 there were 21 Total Crashes. Thirteen of the 21 were deemed correctable by the improvements.

The raised islands were constructed in the crossover to prevent through and left turn movements from the side street approaches. Vehicles on SR 2234/ SR 2500 (Mark's Creek Road) could not enter the intersection safely due to insufficient gaps in traffic. The high traffic volumes on US 64 also created long delays for motorists turning left or going straight from SR 2234/ SR 2500 (Mark's Creek Road). It was felt that the directional crossover would reduce the number of crashes at the intersection with minimal impact on traffic progression along US 64.

The project was completed on November 30, 2001 at an estimated cost of \$33,000.

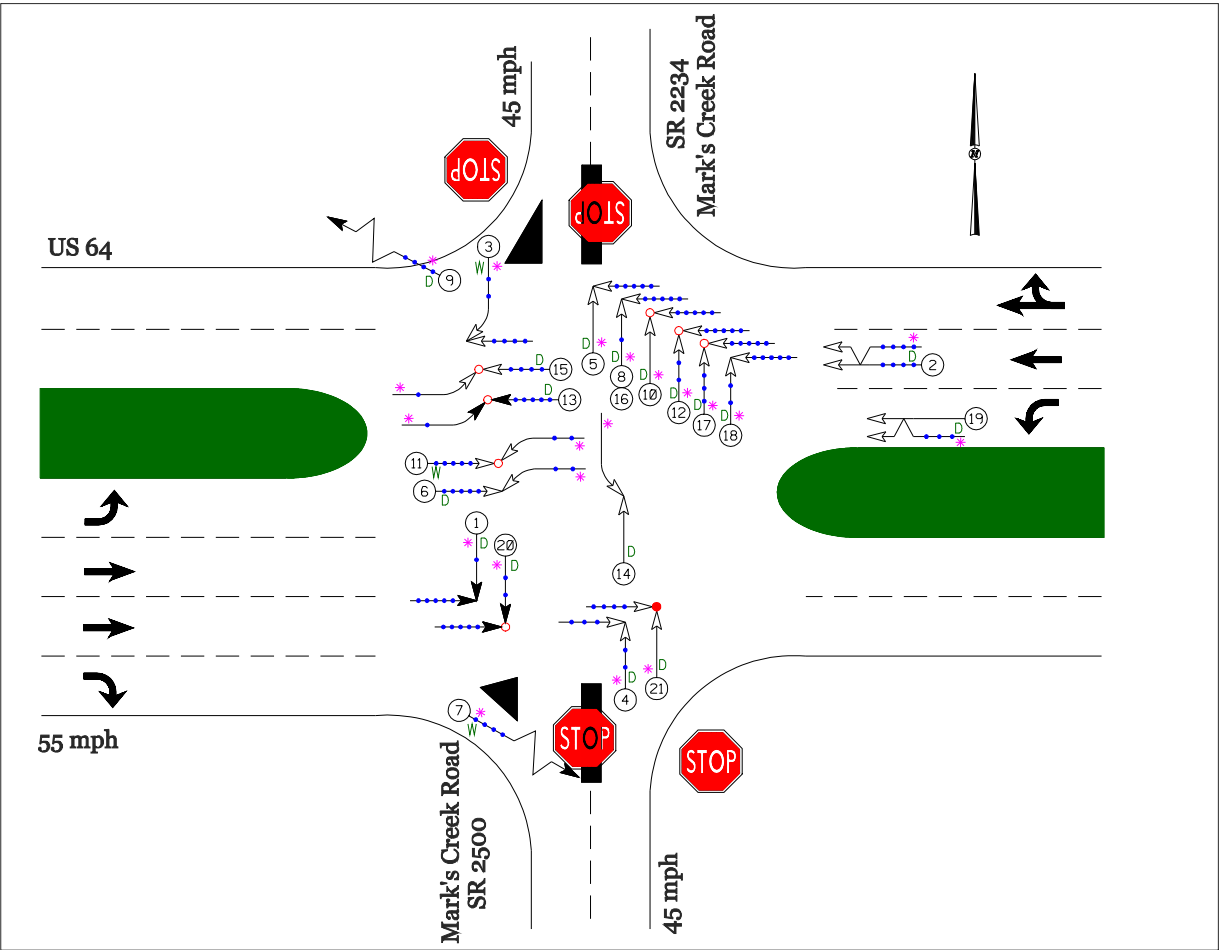


Before Period Collision Diagram

October 1, 1998 through September 30, 2001

(3 Years of Crash Data)

2000 ADT = 45,000



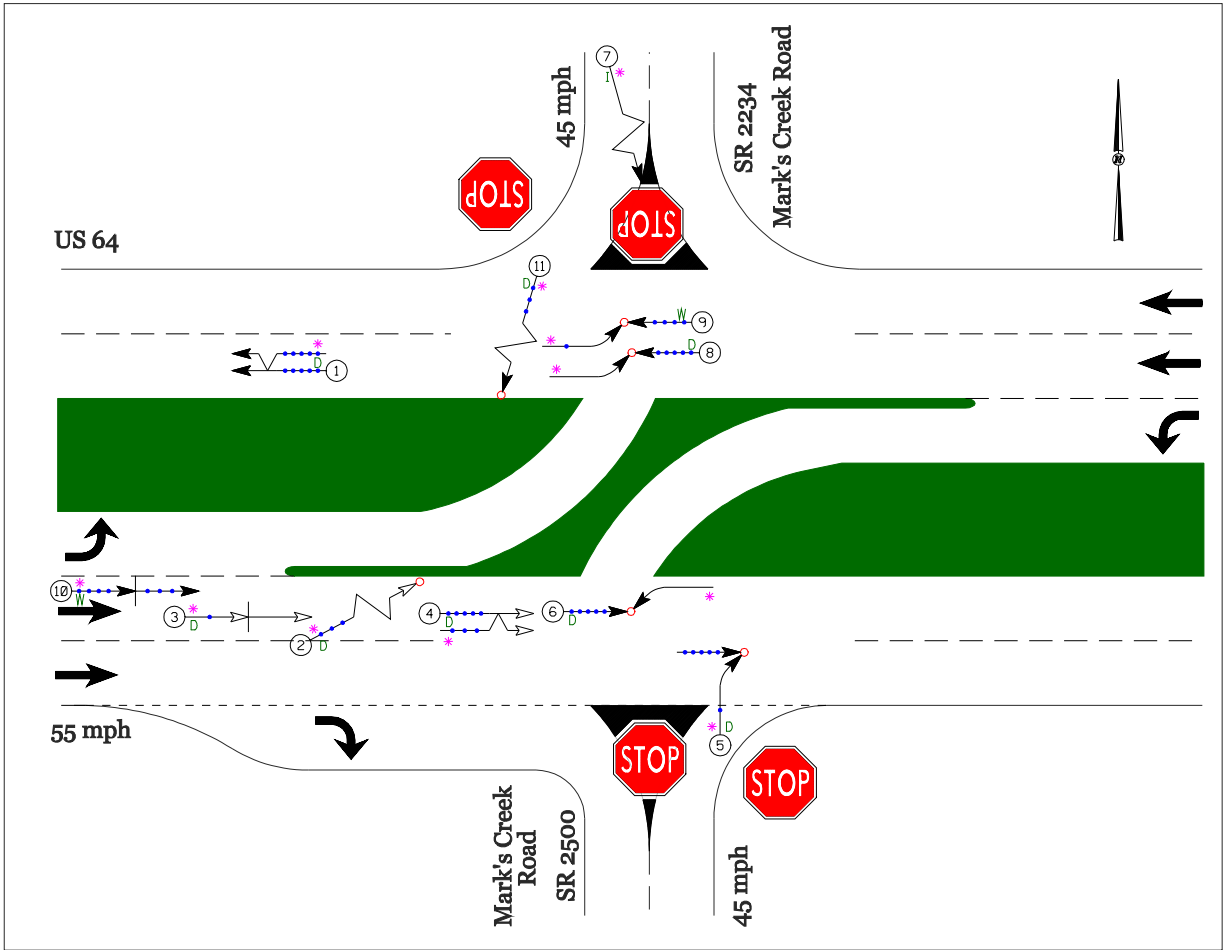
- 21 Total Crashes
- 11 Angle Crashes
- 5 Left Turn-Same Roadway Crashes
- 1 Right Turn-Different Roadway Crash
- 2 Run Off Road Crashes
- 2 Sideswipe Crashes
- 17 Target Crashes*
- 1 Target Fatal Injury Crash
- 7 Target Non-Fatal Injury Crashes
- 9 Target PDO Crashes

After Period Collision Diagram

February 1, 2002 through January 31, 2005

(3 Years of Crash Data)

2003 ADT = 47,600



- 11 Total Crashes
- 3 Left Turn-Same Roadway Crashes
- 1 Right Turn-Different Roadway Crash
- 2 Rear End Crashes
- 3 Run Off Road Crashes
- 2 Sideswipe Crashes
- 4 Target Crashes*
- 0 Target Fatal Injury Crashes
- 4 Target Non-Fatal Injury Crashes
- 0 Target PDO Crashes

* Target Crashes are deemed correctable by the treatment.
For this evaluation, Target Crashes include all Frontal Impact Crashes such as:
Left Turn-Same Roadway, Left Turn-Different Roadways, Right Turn-Same Roadway,
Right Turn-Different Roadways, Head On, and Angle